SLURM Process and Thread Binding

- **HSW node** : NUMA board
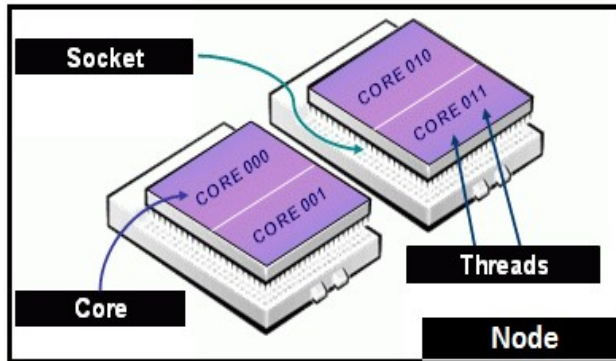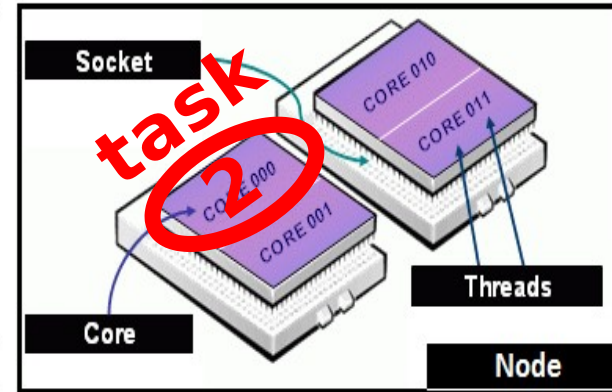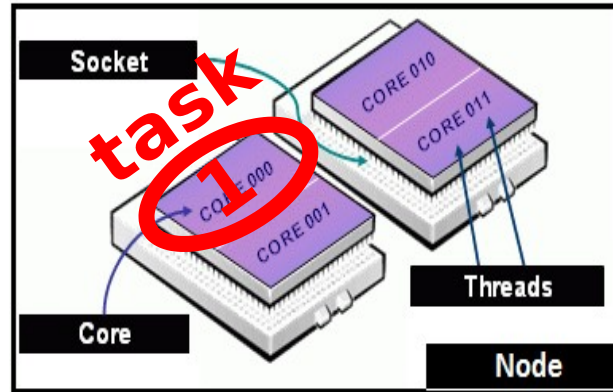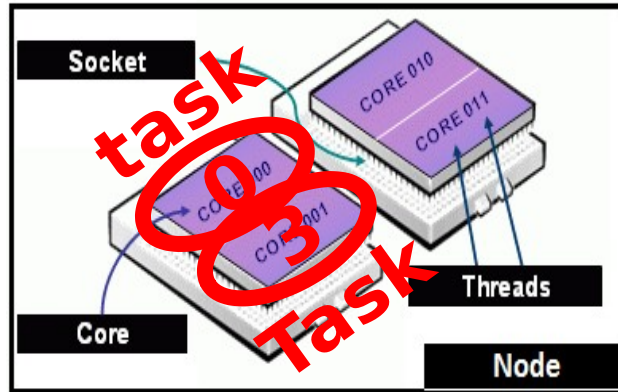 - 2 sockets with 12 cores
  - each core 2 CPUs/HyperThreads
- Process Mapping : Distribution of the ranks on the nodes
  srun --distribution=<block|cyclic[:block|cyclic]>
  - First   Argument: block or cycle on consecutive nodes
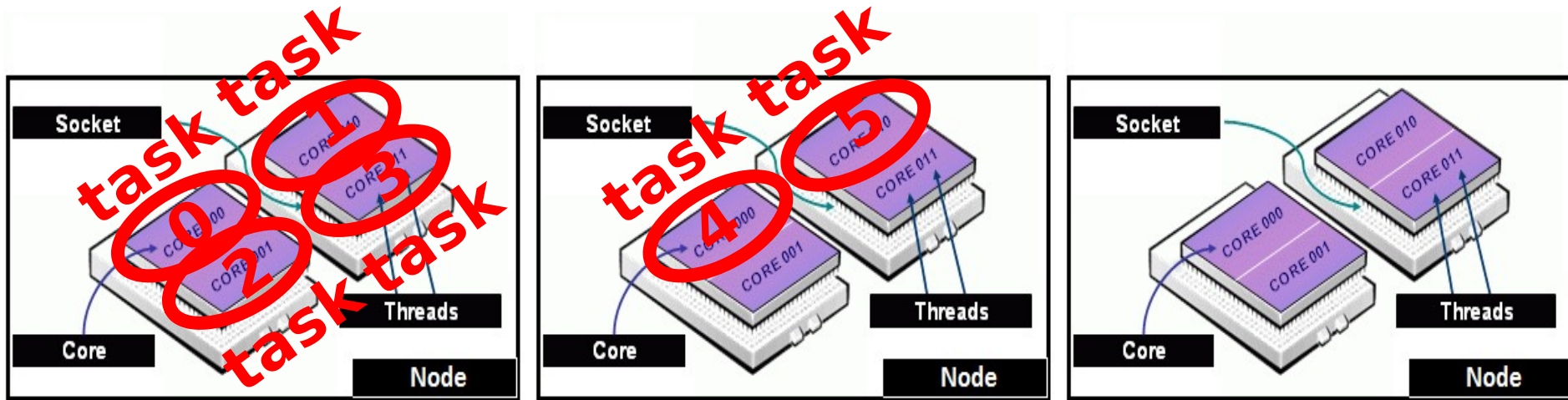 - Second Argument: block or cycle on consecutive sockets
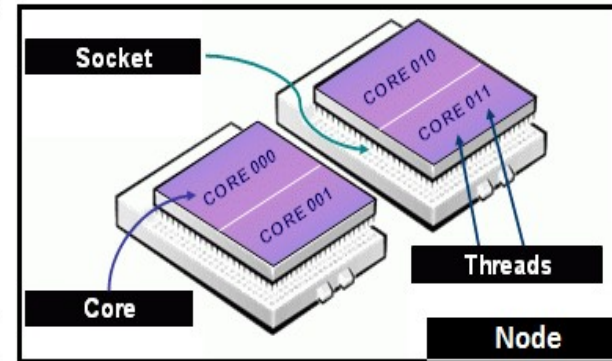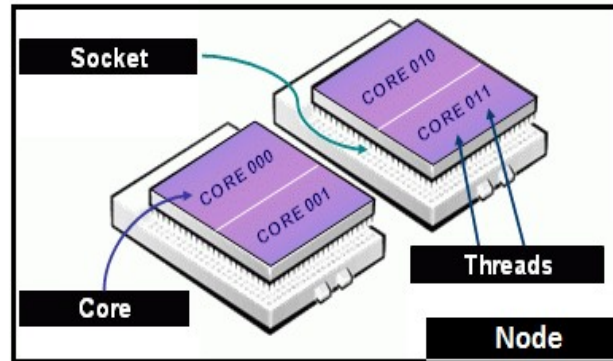
SLURM Process und Thread Binding

srun --distribution=cyclic:block

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srun --distribution=block:cyclic

mistral default is block:block

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- Binding ranks to cores, cpus, …

  srun --cpu_bind=<[verbose,]type>

  - bind to a single core: <type> = cores
  - bind to a single CPU/HyperThread: <type> = threads
  - custom bindings: <type> = map_cpu:<list>